CORRES. CONTROL
OUTGOING LTR. NO.
DOE ORDE 4700.1

98-RF-00304

| DIST. | LTR | ENC |
|---|---|---|
| BENSUSSEN, STAN | | |
| BRAILSFORD, M | | |
| BUHL, TONY | | |
| BURDGE, LARRY | | |
| CARD, BOB | | |
| CHAPIN, JOHN | | |
| COLES, GARY | | |
| CROWE, STEVE | | |
| ERBACHER, BA | x | |
| ERVIN, PAT | x | |
| HARDING, WYN | | |
| HARROUN, BILL | | |
| HEDAHL, T. | x | |
| LEONARDI, KEN | | |
| MARTINEZ, LEN | | |
| MCGOVERN, LE | | |
| OGG, BOB | | |
| PARKER, ALAN | x | |
| SAM GIANTI | | |
| SPROLES, NOR | | |
| TILLER, BOB | | |
| TUOR, NANCY | | |
| VOORHEIS, GARY | | |
| WHITING, JOHN | | |
| THELTON, D. | | |
| RUSSEGAARD | | |
| UTCHINS, N | | |
| ESTA, S. | x | |
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| ORRES.CONT | X | X |
| DMIN RECRD | | |
| LGD.116 | X | X |
| ATS/T130G | | |

CLASSIFICATION:
CNI
NCLASSIFIED X
ONFIDENTIAL
ECRET

UTHORIZED CLASSIFIER SIGNATURE:
ate: 1-20-98

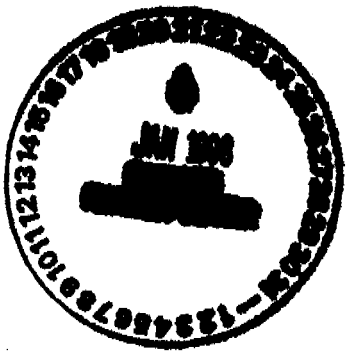
REPLY TO RFP CC NO.:

TION ITEM STATUS:
PARTIAL/OPEN
CLOSED

.TR APPROVALS:

. & TYPIST INITIALS:
JWW:s

KAISER•HILL
COMPANY



January 19, 1998 98-RF-00304

Patricia Powell
RFFO Cultural Resources Manager
DOE, RFFO

REFORMATTED NATIONAL HISTORIC PRESERVATION ACT DOCUMENTATION PACKAGES FOR BUILDINGS 114, 120, 762, 792A, 888, 901, AND 996 - PFE-001-98

This memo transmits a copy of the reformatted Historic American Engineering Record (HAER) packages for Buildings 114, 120, 762, 792A, 888, 901, 996. These were reformatted from our original submittal to reflect what is currently requested by the National Park Service (NPS). In their request, the NPS indicated they had not previously requested this format. The originals, printed upon acid free paper, labeled in accordance with the new NPS HAER documentation requirements, have been hand carried to you for transmittal to the NPS. These packages have been reviewed for classification for release to the NPS. Please note that all text packages reflect the format changes requested by the NPS for future submittals.

Kaiser-Hill awaits the feedback from the NPS on this reformatting. Additionally, we plan to produce a complete set of the narratives for submittal with the final documentation package. This will ensure consistency across the entire documentation package as finally submitted.

Kaiser-Hill has received and resolved two inquiries regarding the protection of the historic resource while documentation was in progress. You may wish to report to the NPS that we confirmed those actions did not impact any resources that were not already documented. These inquiries demonstrate that the resource protection program is working.

ser-Hill Company, L.L.C.
rier Address: Rocky Flats Environmental Technology Site, State Hwy. 93 and Cactus, Rocky Flats, CO 80007 • 303.966.7000
ling Address: P.O. Box 464, Golden, Colorado 80402-0464

If you have any questions about these packages, please contact me at extension 8187 or pager 3267.

P. F. Ervin
D&D/Projects
Kaiser-Hill Company, L.L.C.

sak

Orig. and 1 cc - Patricia Powell

Attachment:
As Stated

cc:
William Fitch
Fred Gerdeman

Retired triggers were also sent back to the Rocky Flats Plant from Pantex for recovery of valuable plutonium and uranium. The retired triggers were stored in the underground vaults until they were moved to the 700-area buildings where recovery operations took place.

Building 999 was constructed in 1959 to increase storage capacity. For security reasons, the contractor hired to construct the vault was not allowed access from or contact with Tunnel 997. After the contractor completed the vault, site personnel cut a hole in the tunnel wall and connected Building 999 to the tunnel.

A second tunnel/vault system (998) extends from the center of the north wall of Building 991. Tunnel 998 is 71/2' wide and 10' high. Vault 998 is a one-room vault. The four vaults have a total area of 20, 940 square feet.

The storage vaults at the Rocky Flats Plant are unique in construction for storage facilities within the Department of Energy nuclear weapons complex. The walls of the vaults are constructed of reinforced concrete approximately 14½' in thickness and are buried 15' underground, while the tunnel walls are only 2' thick. At other Department of Energy weapons production facilities, storage vault walls are generally constructed only 2 to 3' thick (Cunningham).

Sources: Cunningham, Steve, employed at the Rocky Flats Plant since 1977 by the site contractor, personnel communication, August 1997.

EG&G, 1994, *Historical Release Report (HRR)*, Rocky Flats Plant Repository.

EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Plant Repository.

Richmond, Lou, employed at the Rocky Flats Plant since 1970 by the site contractor, personnel communication, August 1997.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area,* Rocky Flats Plant Repository.

Wilson, Sharon, employed at Rocky Flats Plant since 1981 by the site contractor, personal communication, September 1997.

Historian: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2$M), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2$M, 1997.

**HISTORIC AMERICAN ENGINEERING RECORD**

INDEX TO PHOTOGRAPHS

ROCKY FLATS PLANT, STORAGE VAULT HAER No. CO-83-E
(Rocky Flats Plant, Building 996)
Located in the southeast corner of the Protected Area, northwest of Building 991.
Golden Vicinity
Jefferson County
Colorado

Photograph from the Rocky Flats Plant photography archives, site photography contractor, Summer of 1994.

CO-83-K-1 View of one of the inner rooms within Vault 996. The underground vaults were used to store Special Nuclear Material awaiting on- and off-site shipment.

# HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT, STORAGE VAULT HAER No. CO-83-E
(Rocky Flats Plant, Building 996)

Note: The documentation for Building 996 also represents other storage vaults, including buildings 997, 998, and 999.

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 996 is in the southeast corner of the Protected Area, northwest of Building 991.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Building 996, part of the original D Plant, was used to store nuclear weapons components awaiting off-site shipment.

Description: Building 996 is an underground vault, rectangular in shape. The vault is 60' x 68' and 10' high. Heavy walls divide the vault into five, nearly equal, rooms and an entry hall. A 6" inch thick metal door seals the vault. The underground vault is constructed of thick, reinforced concrete. Air is supplied to the vault through an air supply plenum, and air is exhausted through the air filter plenum in Building 985.

Building 996 is located northwest of Building 991, and is connected to the northwest corner of the building by underground Tunnel 996. Tunnel 996 is 10 to 12' wide x 11 to 13' high and approximately 25 yards long. At the northwest end of Tunnel 996, Tunnel 997 begins and proceeds west for approximately 100 yards, a distance often traveled by employees on bicycles (Cunningham). Building 997 is at the western-most end of Tunnel 997, and Building 999 is on the north side approximately midway along Tunnel 997. Building 997 is a four-room chamber, similar in design and size to Building 996. Building 999 is a three-room chamber.

History: Building 996 was constructed in 1952 as part of the original Plant D, Building 991. Building 991 was the shipping and receiving facility for incoming and outgoing Special Nuclear Material and supplies. Trigger components manufactured in other buildings around the site, as well as components manufactured at the Oak Ridge Tennessee facility, were sent to Plant D for assembly and storage. The Rocky Flats Plant received and shipped products by rail and by truck. The assembled triggers (also known as pits) were shipped off site to the Pantex Plant in Amarillo Texas for final weapons assembly. A railroad spur terminated to the northeast of Building 551 near the center of the Industrial Area of the site. For each off-site rail shipment, members of the heavily armed protective force (site security personnel) would escort the shipment from the vault, across the site, and on to the boxcars waiting at the railroad spur (Richmond).

HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT, BUS STOP SHELTER HAER No. CO-83-F
(Rocky Flats Plant, Building 114)

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 114 is located on the west side of Fourth Street, south of Central Avenue.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Building 114 was built to shield workers from inclement weather.

Description: Building 114 is a small rectangular concrete block building with a flat metal roof. The building is approximately 8' x 9' (72 square feet). The building has windows on all sides. The east and west elevation windows are fixed, multi-paned, with metal sashes. The north and south elevations have double hung, metal sash windows, and wooden doors with windows.

History: During the 1950s, as part of early security efforts, the only point of entry to the site was from the west off Highway 93, and the only vehicles allowed onsite were construction and government vehicles. Due to the elevation, exposed nature, and close proximity to the Rocky Mountain foothills, winds at the Rocky Flats Plant periodically approach destructive levels of eighty miles per hour or greater, particularly in the winter. Vehicles were parked along on-site roadways to create windbreaks and employees often had to hold hands to be able to navigate in the strong winds (Cunningham). Building 114 was built in 1959 to shield workers from the weather while waiting for the shuttle bus to transport them to their respective work sites.

Workers parked along Highway 93 were bused on a dirt road to the administration area of the site (Building 111) to check in and have timecards punched (Weaver), or employees could park in one of two lots outside the fenced plant site. One parking lot was west of Building 111, the other was west of Building 881. Building 864, a guard post near building 881, was a second location where employees could have their timecards punched. Once on site, employees were bused or walked to their respective work locations. Buses transported employees to the security posts at the production buildings.

In 1957, a design change was made in the triggers manufactured at the Rocky Flats Plant. This design required more machining, which, in part, led to a dramatic growth in the employment. By 1958, employees were allowed to drive their personal cars on the site.

Sources: Cunningham, Steve, employed at the Rocky Flats Plant since 1977 by the site contractor, personal communication, August 1997.

EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Repository.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area*, Rocky Flats Repository.

Weaver, Jack, employed at the Rocky Flats Plant since September of 1961 by the site contractor, personal communication, August 1997.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2$M), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2$M, 1997.

**HISTORIC AMERICAN ENGINEERING RECORD**

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ROCKY FLATS PLANT, BUS STOP SHELTER HAER No. CO-83-F
(Rocky Flats Plant, Building 114)
Located on the west side of Fourth Street, south of Central Avenue.
Golden Vicinity
Jefferson County
Colorado

Photograph by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, Summer 1997.

CO-83-F-1 View, looking south, of the north elevation of Building 114. Building 114 served as the bus stop shelter when personal vehicles were banned on the site property.

HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT, GUARD FACILITY HAER No. CO-83-G
(Rocky Flats Plant, Building 120)

Note: The documentation for Building 120 also represents other access guard facilities, including buildings 100, 113, 133, 900, and 920.

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 120 is located on the south side of the West (access) Road, approximately 2,323' east of the intersection of Colorado Highway 93 and the West Road.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Building 120 is one of two guard facilities used by security personnel to control access to the site.

Description: Building 120 is a hexagonal structure with windows on four sides. The exterior walls are concrete block, and the interior walls are gypsum board. The dimensions are approximately 18' along the north wall, 15' along the northeast wall, 18' along the southeast wall, 14' along the south wall, 18' along the southwest wall, and 15' along the northwest wall. Three guard booths to the north of the structure, are on raised islands. Each guard booth is equipped with a traffic control barrier. Building 120 has a stand-by generator with a 2,000-gallon underground storage tank for diesel fuel, which is located south of the building.

Building 100, built in 1969, is four-sided and approximately 430 square feet. It is located approximately 550' southeast of Building 131 and is situated in the middle of the intersection of West Road, Cactus Avenue, and First Street. Building 113, built in 1988, is four-sided and 65 square feet. It is located west of the intersection of Fourth Street and Central Avenue. The structure was used to control access to the Department of Energy/Rocky Flats Field Operations Office and the Managing and Operating Site Contractors Headquarters. Building 133, built in 1986, is four-sided and 32 square feet. It is located on the roadway at the entrance to Building 130, the 130 Warehouse, and the adjacent parking areas. Building 900, built in 1964, is four-sided, approximately 320 square feet. It is located approximately 300' southeast of Building (guard tower) 901 in the middle of Central Avenue and East (access) Road. Building 920, built in 1986, is six-sided, approximately 560 square feet. It is approximately 1,500' west of the intersection of Indiana Street and the East Road on the north side of the roadway. Building 920 housed personnel responsible for controlling access to the site from the east access point.

History: Since 1951, the West Road has been the primary entry point to the Rocky Flats Plant site, and the only access until 1964. Building 120 was built to house the protective force personnel, responsible for controlling pedestrian and vehicle entrance to and egress from the Rocky Flats Plant. Visitors and deliveries to the site had to enter through the west entrance.

When the Rocky Flats Plant first opened, workers parked west of the site on Highway 93 and were bused to the administration area (Building 111) to check in, and then walked or were bused to their respective work buildings. Shortly after the Rocky Flats Plant opened, two parking lots were built outside the fenced plant operations area. One parking lot was located west of Building 111. Employees parked in this lot and entered the site through Building 11 (111). A second parking lot was located just west of Building 81 with guard post 864 as the check in point.

By 1958, employees working in buildings 77 and 91were allowed to drive their personnel cars onto the plant property through a gate near Building 81 (881) (Riddle). In 1961, work shifts were increased from one shift, five days per week to multiple shifts, seven days a week in order to keep up with production demands (Weaver). By the spring of 1962, there were 2,100 employees at the site, an increase from 1,435 employees in September of 1961 (Weaver). In 1964, an east access route from Indiana Street was built with a guardhouse, Building 900, to check employee badges as they entered the plant. Employees entering from the west were still required to park outside the fence or enter through the gate near Building 81 (881) until 1969, when Building 100 was built as a western badge check point (Riddle).

In the 1970s and 1980s, plant security personnel were concerned less with espionage and more with the threat of terrorism and infiltration of the plant by protestors. Better protection of the outer boundaries of the area became necessary. In 1972 a buffer zone of 4,600 acres around the existing plant was purchased for additional protection. In 1985, Building 120 was built to control site access from the western outermost edge of the buffer zone.

Sources: EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Repository.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area*, Rocky Flats Repository.

Riddle, Robert, employed at the Rocky Flats Plant by the site contractor since 1958, personal communication, September 1997.

Weaver, Jack, employed at the Rocky Flats Plant by the site contractor since 1961, personal communication, August 1997.

Historian: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2M$), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2M$, 1997.

# HISTORIC AMERICAN ENGINEERING RECORD

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ROCKY FLATS PLANT, ACCESS CONTROL FACILITY HAER No. CO-83-G
(Rocky Flats Plant, Building 120)
Building 120 is located on the south side of the West (access) Road, approximately 2,323 feet east of the intersection of Colorado Highway 93 and the West Road.
Golden Vicinity
Jefferson County
Colorado

Photograph by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, summer 1997.

CO-83-G-1 View, looking east, of the west elevation of Building 120. Building 120 houses the Protective Force personnel responsible for controlling entrance to and egress from the Rocky Flats Plant west entrance.

HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT, GUARD POST HAER No. CO-83-H
(Rocky Flats Plant, Building 762)

Note: The documentation for Building 762 also represents other guard posts used to control access to the Protected Area, including 372 and 792.

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 762 is located north of Building 762A, inside the Protected Area.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Security personnel use Building 762 to control vehicles entering into the Protected Area.

Description: Building 762 is a concrete structure with tubular aluminum sections and asbestos panels to sill height of the windows on three sides. The roof is concrete on metal pans. The building is approximately 25' x 25' (625 square feet). A vehicle trap east of the building has electric gates on the north and south ends of the road cut through the double fence of the Perimeter Security Zone. Buildings 372 and 792 are similar in construction and size to Building 762.

History: Building 762 was constructed in 1983 as part of the Perimeter Security Zone, a $5 million project to surround and secure the plutonium operations at the Plant. Three access points, also referred to as portals, are located in the Perimeter Security Zone. Building 762 (Portal 1) is the only entrance point for vehicles going into the Protected Area. Building 372 (Portal 2) is located south of Building 371, is the exit point for vehicles, and Building 792 (Portal 3) located north of Building 771, is for pedestrian access only. All three portals allow entrance and egress for pedestrians.

To enter the Protected Area, until 1989, an employee placed their badge in a drawer to pass it into the guard posts to a member of the protective force for a badge check. The badge was returned and the employee entered the area through a metal detector. Upon leaving the Protected Area, an employee held up their badge and exited. As the Cold War continued and concerns and fear escalated, regulations and requirements were implemented to tighten security. New requirements included more advanced Special Nuclear Material metal detectors for people and x-rays for property entering and exiting the Protected Area. A second access control post was built at each of the portals to accommodate the equipment and badge-check functions.

Once the new larger access control posts were built in 1989, the original security buildings were no longer were needed to provide badge check function. At Portal 1, security personnel who scrutinize all vehicles prior to entering the Protected Area with radiation monitoring and detection equipment, and search the vehicles for prohibited equipment and materials used Building 762 as a shelter (Cunningham).

Sources: Cunningham, Steve, employed at the Rocky Flats Plant since 1977 by the site contractor, personnel communication, September 1997.

EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Repository.

Richmond, Lou, employed at the Rocky Flats Plant since 1970 by the site contractor, personal communication, August 1997.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area,* Rocky Flats Repository.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2$M), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2$M, 1997.

# HISTORIC AMERICAN ENGINEERING RECORD

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ROCKY FLATS PLANT, GUARD POST
(Rocky Flats Plant, Building 762)
Located north of Building 762A, inside the Protected Area.
Golden Vicinity
Jefferson County
Colorado

HAER No. CO-83-H

Photograph by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, Summer 1997.

CO-83-H-1 View, looking north, of the south elevation of Building 762. Building 762, Portal 1, is one of three pedestrian access points into the Protected Area, surrounding plutonium operations. Portal 1 is also the entrance for all vehicles entering the Protected Area.

HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT,
ACCESS CONTROL POST
(Rocky Flats Plant, Building 792A)

HAER No. CO-83-I

Note: The documentation for Building 792A also represents other access control buildings, including 372A and 762A.

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 792A is located north of Building 771, in parking area 71, just south of the north perimeter road.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Security personnel use Building 792A to monitor pedestrian entrances and egresses through the Perimeter Security Zone into and out of the Protected Area.

Description: Building 792A is a concrete structure. The roof is concrete on metal pans. The building is approximately 69' x 26' (1794 square feet). Two doors are located at each of the south and north ends of the building. Two turnstiles are located near the south end of the building.

Buildings 372A and 762A are similar in construction to Building 792A. Building 372A is a 1,800 square foot structure and Building 762A is 4,000 square foot structure. Building 372A is located northeast of the intersection of Sage Avenue and Fourth Street. Building 762A is located just east of Eighth Street and north of Central Avenue.

History: Building 792A was constructed in 1989 in the Perimeter Security Zone – a fence and intrusion detection project surrounding the plutonium operations. When the Perimeter Security Zone was completed in 1983, three guard posts (372, 762, and 792) were built into the inner fence to house the protective force personnel that conducted badge checks to monitor employee entry and exit from the Protected Area. As the Cold War continued, stricter requirements were implemented to safeguard against potential plutonium theft and additional building space was needed to house the equipment required for entry and egress checks. Building 792A was one of three additional access control posts, built in 1989 to accommodate the equipment and badge check functions.

Access into the Protected Area through Building 792A is gained by entering the structure through the north doors; passing through a badge check, a metal detector, and turnstile; and then exiting through doors at the south end of the building and into the fenced Protected Area. Personal property going into the Protected Area is passed through a x-ray device.

Sources: Cunningham, Steve, employed at the Rocky Flats Plant since 1977 by the site contractor, personnel communication, September 1997.

EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Repository.

Richmond, Lou, employed at the Rocky Flats Plant since 1970 by the site contractor, personal communication, August 1997.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area,* Rocky Flats Repository.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2$M), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2$M, 1997.

**HISTORIC AMERICAN ENGINEERING RECORD**

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ROCKY FLATS PLANT, GUARD POST HAER No. CO-83-I
(Rocky Flats Plant, Building 792A)
Located north of Building 771, in parking area 71, just south of the north perimeter road.
Golden Vicinity
Jefferson County
Colorado

Photograph by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, Summer 1997.

CO-83-I-1 View, looking south, of the north elevation of Building 792A. Building 792A, at Portal 3, is one of three pedestrian access points through the Perimeter Security Zone into the Protected Area.

HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT, GUARD TOWER HAER No. CO-83-J
(Rocky Flats Plant, Building 901)

Note: The documentation for Building 901 also represents other guard towers, including buildings 375, 550, and 761.

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Guard tower 901 is located in the southeast corner of the Protected Area.

Significance: This building is a primary contributor to the National Register eligible Rocky Flats Plant historic district, associated with the U.S. strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Building 901 is an integral part of the Perimeter Security Zone, built to monitor activities around the plutonium operations.

Description: Building 901 is 12' x 12' and 45' high (144 square feet). The building has an interior stairwell leading to an observation deck. The tower is brick and concrete with a concrete-on-metal roof. The structure has three levels. The first floor has a protected entrance and houses a transformer. Approximately 26' above the first level is an equipment room for electrical heating and air conditioning equipment. The observation deck is about 10' above the equipment room.

Buildings 375, 550, and 761 are similar in construction and size of Building 901.

History: In the 1970s and1980s, security at the Rocky Flats shifted its focus from espionage to the threat of terrorism and infiltration by protesters. The terrorist attack during the 1972 Olympic Games in Munich led the U.S. government to believe that trained terrorists could attack national defense facilities. A few years later, the plant also began to experience anti-nuclear demonstrations and rallies. In response, the protective force initiated riot control training and adopted a more offensive security posture (Richmond). In 1978, plans to install a $5 million Perimeter Security Zone surrounding the plutonium operations buildings were developed. The Perimeter Security Zone, completed in 1983, consists of a double perimeter fence with closed circuit televisions, alarms, and an uninterrupted power supply. Security personnel were on constant surveillance and provided verification of movement detected by the security system at the perimeter of the plutonium operations. Access into and out of the zone was controlled at three checkpoints.

Four guard towers were installed as part of the Perimeter Security Zone inside the inner fence. The towers provided security personnel with a clear, higher view in all directions, including the Protected Area, fence lines, and the buffer zone. Building 901 is located in the southeast corner of the Perimeter Security Zone. The other towers are located in the three remaining corners of the Perimeter Security Zone. Building 550 is in the southwest corner, Building 761 is in the northeast corner, and Building 375 is in the northwest corner.

Prior to construction of the Perimeter Security Zone, each of the production buildings had a separate "protected area." Fencing surrounded each building complex, as well as the entire Industrial Area. Production buildings outside the Perimeter Security Zone (beryllium and uranium) maintained separate "protected areas" until well after production stopped in 1989. The protective force controlled access into each building. Multiple layers of security were enforced throughout the site and at every production building.

The end of the Cold War and weapons production at the Rocky Flats Plant brought the end to site protests. The protective force has returned to a more defensive security posture (Richmond).

Sources: EG&G Rocky Flats, Inc., 1995, *Site Safety Analysis Report, Notebook 13-Security*, Rocky Flats Repository.

Cunningham, Steve, employed at the Rocky Flats Plant since 1977 by the site contractor, personnel communication, September 1997.

Richmond, Lou, employed at Rocky Flats Plant since 1970 by the site security contractor, personal communication, August 1997.

U.S. Department of Energy (DOE), 1995, *Final Cultural Resource Survey Report Rocky Flats Environmental Technology Site, The Industrial Area.* Rocky Flats Repository.

Historians: D. Jayne Aaron, Environmental Designer, engineering-environmental Management, Inc. ($e^2$M), 1997. Judith Berryman, Ph.D., Archaeologist, $e^2$M, 1997.

**HISTORIC AMERICAN ENGINEERING RECORD**

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ROCKY FLATS PLANT, GUARD TOWER — HAER No. CO-83-J
(Rocky Flats Plant, Building 901)
Located in the southeast corner of the Protected Area.
Golden Vicinity
Jefferson County
Colorado

Photograph by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, Summer 1997.

CO-83-J-1 View, looking north, of the south elevation of Building 901. Building 901 is one of four guard towers installed as part of the Perimeter Security Zone to provide protective force personnel with a clear high view of the surrounding areas. The Perimeter Security Zone consists of a double perimeter fence with closed circuit televisions, alarms, and an uninterrupted power supply.

**HISTORIC AMERICAN ENGINEERING RECORD**

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ROCKY FLATS PLANT — HAER No. CO-83
(Rocky Flats Environmental Technology Site)
Main Entrance on Highway 93
Bounded by Highways 93, 128, and 72, and Indiana Street
Golden Vicinity
Jefferson County
Colorado

Photographs CO-83-1 through CO-83-9, by Timothy McGrath and Katherine T. Abeta, Source One, site photography contractor, summer, 1997.
Photographs CO-83-10 through CO-83-32, by various site photography contractors, dates indicated in parentheses.

CO-83-1 View, looking north, north of Portal 1, just inside the Protected Area. On the left side of the photograph is Building 709, the cooling tower for Building 707, and behind Building 709 is Building 707, the newest of the plutonium fabrication buildings. In the right foreground is Building 763, a breezeway for pedestrians. In the far left of the photograph are the T750 trailers and Building 750, the production support engineering facility.

CO-83-2 View, looking northwest, from inside the Protected Area at the base of Tower 901. The buildings in the foreground include 984, 992, 991, 989, and 968. These buildings make up the Building 991 complex. Building 991, Plant D, was the first operational building on site, constructed in 1951 as the final assembly and shipping and receiving building. To the north and northwest of Building 991 are the underground vaults and tunnels used to storage weapons components.

CO-83-3 View of Central Avenue looking west from just east of the intersection of Central Avenue and the East Perimeter Road. The Rocky Flats Plant is about 16 miles northwest of Denver on a plateau at the eastern edge of the Front Range of the Rocky Mountains.

CO-83-4 View looking west down Central Avenue at the intersection with Seventh Street. The Plant has most of the amenities of a small town – water supply, waste water treatment, police force, fire department, food services, hospital, communications network, steam generation, vehicle maintenance, transportation, and a government.

CO-83-5 View looking south down Sixth Street at the intersection with Central Avenue. As part of the initial site development, a railroad spur, access roads, power lines, and telephone lines were built. All facilities were heated by steam generated in Building 443 and piped throughout the site. The building in the background of the photograph is Building 664, a low-level waste storage facility.

CO-83-6 View looking north on Sixth Street, across Central Avenue. The building on the right is Building 551, built in 1953 as a warehouse and metal fabrication shop. The building on the left is Building 334, also built in 1953, as the electrical and general maintenance shop. In the center of the photograph in the background is Building 374, the aqueous process waste treatment plant.

CO-83-7 View looking west down Central Avenue at the intersection with Seventh Street. The plant was built on the site with four separate production areas, and an administration and support area. This photograph shows the eastern edge of the core administration and support area, built in the early 1950s. In the left foreground of the photograph is Building 442, used to test all HEPA filters on site.

CO-83-8 View, looking northeast, from the T371 trailers. In the foreground is Building 371, built in 1981 to replace Building 771 for plutonium recovery operations. In the background, to the east of Building 371, are the 700-area buildings, plutonium operations.

CO-83-9 View looking southeast at the 771-area complex. The 771 complex, originally known as Plant C, housed all the plutonium processes until 1956 when Building 776/777 became operational.

CO-83-10 Aerial view looking northwest at the 400-area complex. This area of the plant manufactured non-plutonium weapons components from beryllium, depleted uranium, and stainless steel. The 400-area also included a facility for the modification of Safe Secure Transport vehicles for Special Nuclear Materials being shipped to and from the site. Building 444, in the upper right edge of the photograph, was the original Plant A. The large building in the top of the photograph is Building 460, built as a state-of-the-art stainless steel manufacturing facility (6/27/95).

CO-83-11 Aerial view looking north at the Building 800-area complex. Enriched uranium components were manufactured in this area of the site. Building 881, in the right foreground of the photograph, was the original Plant B. Building 883, used for rolling and forming uranium components, is directly to the north of Building 881. To the east of Building 883 is Building 865, a research and development facility for alloys and non-plutonium metals. In the foreground to the west of Building 881 is an office building, 850 (6/7/90).

CO-83-12 View of the Rocky Flats Plant looking west. After 38 years, weapons production ceased in 1989. In 1992, the plant mission changed from weapons production to environmental clean up and restoration. By 1995, the site had begun to be dismantled (6/27/95).

CO-83-13 Aerial view of the Rocky Flats Plant from directly overhead in 1954. In 1950, Dow Chemical Company was chosen by the Atomic Energy Commission to establish the Rocky Flats Plant as an atomic bomb trigger fabrication facility. The criteria for siting such a plant included a location west of the Mississippi, north of Texas, south of the northern border of Colorado, and east of Utah; a dry moderate climate; a supporting population of at least 25,000 people; and accessibility from Los Alamos, NM, Chicago, IL, and St. Louis, MO. Twenty-one areas in the United States were suggested; seven locations were screened in the Denver area. This four-square mile area was selected and construction began in 1951 (8/31/54).

CO-83-14 View looking west at the east side of Building 81 under construction in 1952. The ground rises in elevation toward the center of the site from the north, east, and south. Buildings 71, 91, and 81 were built into hillsides so that in the event of a Russian attack, all three plants would not be destroyed (1952).

CO–83-15 View looking east at underground vault, Building 997, under construction. The vaults were used to store triggers awaiting off-site shipment, or returned triggers awaiting to be transported to a building for recovery of the plutonium. The vault walls were constructed 14.5 feet thick. Building 991, in the background, was the first operational building on site (2/1/52).

CO-83-16 View looking northeast at Building 11 (111) in 1952. In 1952, buildings 11 (111), 12 (121), 21 (221), 22 (122), 23 (123), and 42 442) were occupied. Buildings 91 (991) and 81 (881) were operational. Buildings 44 (444) and 71 (771) were under construction. The total cost for construction by 1952 was $2.5 million. By September of 1953, Austin Company had completed 21 buildings for an approximate cost of $43.3 million (1952).

CO-83-17 View looking northwest at Building 44 (444) under construction in 1952. Building 444 was a highly sophisticated metal fabrication and machine shop capable of producing parts to extremely close tolerances from beryllium and depleted uranium (3/2/52).

CO-83-18 View of the north elevation of Building 71 (771) under construction in 1952. Building 71 was the original plutonium operations building. Production buildings were built into hillsides and/or below grade as a safety measure against Russian attack (3/2/52).

CO-83-19 View looking north at Building 81 (881) under construction in 1952. This building is a three-story reinforced concrete and steel building constructed below ground. Its roof is flush with the finish grade along the north and most of the east and west sides. The building contained enriched uranium and stainless steel operations, as well as general accounting, computer and information systems, and record management (3/2/52).

CO-83-20 Aerial view of the Rocky Flats Plant looking northeast. The plant was composed of four widely separated areas, each one performing a different type of work. Plant A (44), southwest, fabricated parts from depleted uranium, Plant B (81), south, was enriched uranium operations, Plant C (71), north, plutonium operations, and Plant D (91), east, was final assembly, shipping and receiving (2/6/66).

CO-83-21 Aerial view of the Rocky Flats Plant looking northwest. By the late 1960s, the site had undergone two major expansions. The first expansion in 1956-57, when the trigger design changed and necessitated the addition of seven new buildings. The second large expansion took place from 1964-65, when Rocky Flats became the sole producer of triggers. During this expansion, eleven buildings were added, primarily in research and development laboratories, guard houses, and waste water treatment (7/1/69).

CO-83-22 Aerial view looking east down Central Avenue from west of the administrative and support area of the plant. On the left (north) side of the street in the foreground of the photograph is Building 111, the general administration building. To the east of Building 111 is Building 112, the cafeteria. Further to the east is Building 331, the vehicle maintenance garage and fire department; Building 333, the paint shop; Building 334, the electrical and general maintenance shop; and Building 551, the general warehouse. On the right (south) side of Central Avenue, in the foreground is Building 121, firearms repair. Behind Building 121 is Building 122, emergency medical services, and Building 123, health physics laboratory. Building 441, the production support administrative offices, is to the east of Building 123. To the east of Building 441 is Building 443, the steam generation plant (7/1/69).

CO-83-23 Aerial view looking southeast at the plutonium operation buildings 771, 776/777, and 707. Building 771, in the foreground, was built in 1952 to house all plutonium operations. By 1956, Building 771 was no longer adequate for production demands. Building 776/777, to the south of Building 771, was constructed to house plutonium fabrication and foundry operations. Plutonium recovery remained in Building 771. By 1967, construction on Building 707, to the south of building 776/777, began as production levels continued to expand necessitating the need for additional plutonium fabrication space (7/1/69).

CO-83-24 Aerial view looking southeast at Building 371 under construction in 1974. By 1968, Building 771 was outmoded and new technologies had been developed for plutonium recovery. As a result, a new recovery building, Building 371 was planned. Building 371 suffered from various design problems, which prevented its opening until 1981 and caused termination of recovery operations in 1986. It never became fully operational. To the east of Building 371, is the 700 building complex (4/74).

CO-83-25 Aerial view of the Rocky Flats Plant looking west-northwest in 1974. In 1972, 4,600 acres were purchased around the site to better protect the borders from terrorism and infiltration by protestors. Anti-nuclear demonstration began shortly after the 1969 fire in Building 776/777, and continued until production ceased at the plant in 1989 (10/7/74).

CO-83-26 Aerial view of the Rocky Flats Plant looking northeast. In 1951, a Good Friday issue of the Denver Post announced the Atomic Energy Commission's plans to build the Rocky Flats Plant, under the headline "There's Good News Today." Political leaders expressed great pride in the choice of the Denver-Boulder area as the site for an atomic plant as quoted in the Rocky Mountain News: "We are proud that the area has been chosen for another important contribution to the nation's strength and future security." By the mid 1970s, public opinion of the site had changed (5/4/78).

CO-83-27 Aerial view looking east down the west access road. The first large protest at the plant came in 1978. It was the first major protest at any Department of Energy plant. In response to continuing anti-nuclear protests, in particular a 1979 rally that drew 10,000 participants, Rockwell employees at the plant formed a grassroots organization, Citizens for Energy and Freedom, and organized a pro-nuclear rally, "Power to the People," that attracted 16,000 people (5/4/78).

CO-83-28 Aerial view looking east at the west gate in 1978. Shown is Building 100, the main entrance point to the site from 1969 until 1985. During this time each automobile that entered the site was searched. In 1985, Building 120 was built at the outermost west edge of the site. There were 29 facilities around the site dedicated to security (5/4/78).

CO-83-29 Aerial view of the Rocky Flats Plant looking south. In 1983, the Perimeter Security Zone surrounding the plutonium operations was completed. It consisted of a double perimeter fence, closed circuit televisions, alarms, and an uninterrupted power supply (7/29/83).

CO-83-30 View of a glovebox line used in plutonium operations. Safety and health concerns were of major importance at the plant, because of the radioactive nature of the materials used. Plutonium gives off alpha and beta particles, gamma protons, neutrons, and is also pyrophoric. As a result, plutonium operations are performed under controlled conditions that include containment, filtering, shielding, and creating an inert atmosphere. Plutonium was handled within gloveboxes that were interconnected and ran several hundred feet in length (5/5/70).

CO-83-31 View of a worker holding a plutonium "button." Plutonium, a man-made substance, was rare. Scraps resulting from production and plutonium recovered from retired nuclear weapons were re-processed into valuable pure-plutonium metal (9/19/73).

CO-83-32 Aerial view of the Rocky Flats Plant looking northwest. During the 1980s, a number of complaints concerning safety and environmental errors surfaced, culminating in the 1989 raid on the plant by the FBI for alleged environmental infractions. That same year, production at the plant was halted for correction of safety deficiencies. By 1991, a series of events worldwide reduced the Cold War threat, and in 1992, the Secretary of Energy announced that the mission at the plant would be changed to environmental restoration and waste management, with the goal of cleaning up the plant and site (1989).

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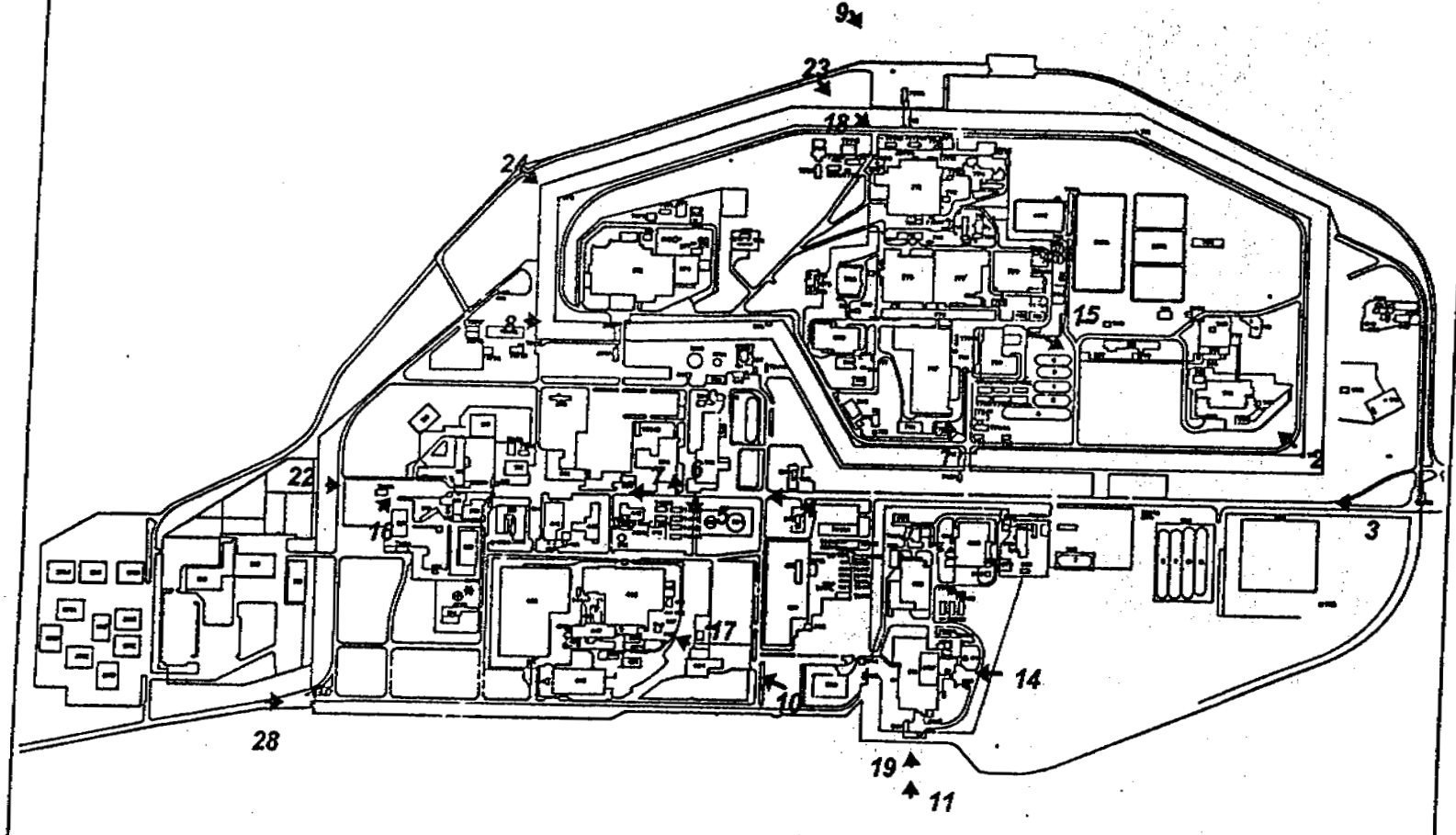


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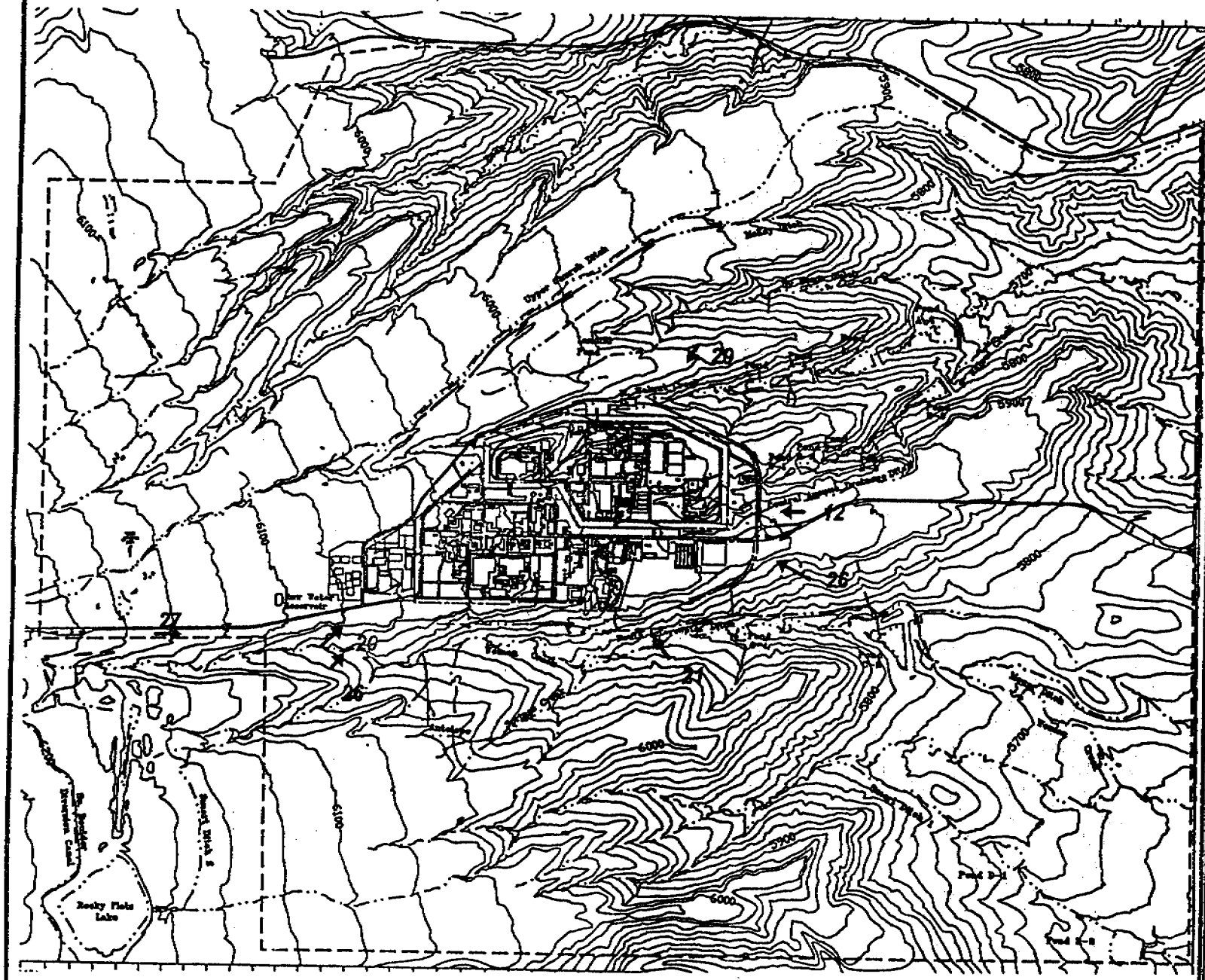

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